



Karsten Knese

Curriculum Vitae

Hard-working, flexible Robotics Engineer with a strong profession in clean code development; seeking new challenges to foster autonomous devices with powerful hardware and artificial intelligence; Passionate and goal oriented team player

#Robotics, #AI, #ComputerVision, #Cloud, #WebServices, #C++, #Python, #Java, #GIT

Education

- 2011 - 2014 Technische Universität München (TUM)
Master of Science (M.Sc.) Robotics, Cognition, Intelligence
- 2012 - 2013 Korea Advanced Institute of Science and Technology (KAIST)
Graduate Student Artificial Intelligence and Robotics
- 2010 Acquisition of *Bachelor of Science (B.Sc.) Applied Science*
- 2010 Acquisition of *Bachelor of Science (B.Sc.) with Honours* given by the Open University for subject Applied Science
- 2007 - 2010 University of Cooperative Education Baden-Württemberg in combination of Karlsruhe Institute of Technology (KIT)

Profession

Employer

- 2014 - now Aldebaran Robotics Paris [www](http://www.aldebaran-robotics.com)
Perception team for people detection and interaction
- 2013 - 2014 PAL Robotics S.L. Barcelona [www](http://www.pal-robotics.com)
Master's thesis in Full-Body Motion Control of Humanoid Robots
- 2012 - 2013 Ocean Robotics and Intelligence Lab KAIST [www](http://www.orilab.kaist.ac.kr)
Integrating Robot Operating System (ROS) G-SLAM and Underwater Sensors
- 2011 CoTeSys [www](http://www.cotsys.de)
Interactive Humanoid Robot System based on Kuka LWR III and Matlab/Simulink
- 2010 - 2011 Acquirer GmbH KIT Spin-Off [www](http://www.acquirer.com)
Java & Java-Script Developer for High Content Screening in a Virtual Cloud Environment with Scientific Linux and KVM
- 2007 - 2010 Steinbuch Centre for Computing KIT [www](http://www.steinbuch.kit.edu)
.net Developer for Microsoft Server Solutions like Sharepoint, SCCM and App-V

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Certificates

- 2009 Microsoft Certified Technology Specialist (MCTS)
- 2009 Acquisition of "train-the-trainer" by the German Industrie- und Handelskammer (IHK)
- 2008 & 2009 Grid- and Cloud-Certification and part of GridKA-School team at KIT [www](http://www.gridka.org)

Extracurricular - OpenSource

- 2013 "Stack-of-Task", CRNS-LAAS, Toulouse [github](https://github.com/stack-of-tasks)
c++ control framework for real-time redundant manipulator control
- 2009 Stipend given by Google Inc. in terms of Google Summer of Code [eclipse-wiki](https://eclipse-wiki.org/)
Contributor at Eclipse Community BIRT Project

Research & Projects

- 2010 - 2011 Implementing a Private Cloud-Computing Environment with Eucalyptus and KVM
- 2008 - 2010 Development of REST Webservice Infrastructure in a Microsoft Environment with SCCM, App-V, Exchange and Active Directory
- M.Sc. Thesis "Realizing Online Self-Collision Avoidance Based on Inequality Constraints with Hierarchical Inverse Kinematics" [pdf](#)
- Project Dynamic Hand Gesture Recognition for Controlling Computer Applications with OpenCV and Python [video](#)
- Project Human Computer Interaction through Microsoft Kinect, Computer Vision and Impedance Control [video](#)
- Project Implementing Bioloid Robot for Walking and Stair Climbing [video](#)
- B.Sc. Thesis Evaluation and Implementation of an Accounting-Solution for a Private Cloud with Eucalyptus [pdf](#)
- Project Implementing an Autonomous Controlled Warehouse Logic with Lego NXT

Publications

- 2011 D. Luetjohann, A. Shah, M. Christen, F. Richter, K. Knese, U. Liebel, "scienet' – towards a global search engine and share engine for all scientific knowledge.", Bioinformatics - Oxford Journals [pdf](#)

Languages

- german native proficiency
- english professional working proficiency
- french limited proficiency
- spanish basic knowledge